

### REMARKS

Claims 1 and 16 – 30 are pending in the present Application. Claims 1, 16 and 17 are withdrawn. Claims 27-30 have been withdrawn by the Examiner, and with traverse by Applicant, as described below. Reconsideration and allowance of the claims are respectfully requested in view of the following remarks.

#### Elections/Restrictions

In the Final Office Action dated Aug. 28, 2006, (hereinafter FOA 08/06), page 2, the Examiner states that Claims 27-30 are directed to an invention that is independent or distinct from the invention originally claimed. Applicants respectfully traverse the Election / Restriction requirement.

Regarding Claim 27, the Examiner asserts that:

The originally presented invention does not require in combination of the materials for the plastic surface made of thermoset and the perform core made of a material recited in claim 27.

(FOA 08/06, page 2)

Applicants respectfully assert that the materials in Claim 27 are within the scope of independent Claim 18, are fully supported by the specification, and hence were part of the originally filed description. Claim 18 includes a plastic surface and a preformed core. The specification, Paragraph [0053], states that “any plastic that exhibits appropriate properties can be employed as the substrate, core and/or coating”. Accordingly, Applicants assert that Claim 27, which further limits Claim 18 by specifying the particular plastic used for the core and the plastic surface, is within the scope of Claim 18 (includes all of the elements thereof) and therefore is not properly restricted from Claim 18.

Regarding Claim 28, the Examiner states that “[t]he originally presented invention of Claim 18 does not require the process of disposing the thermoset coating on the reflective layer.” (FOA 08/06, page 2).

Applicants respectfully assert that Claim 18 employs “comprising” as the transitional phrase, and as such, permits the inclusion of additional steps in the claimed method. Claims 28 – 30 recites all of the elements of Claim 18, plus an additional step, and is fully supported by the

specification as originally filed and Figure 2 in particular. Accordingly, Applicants assert that, if Claim 18 is allowable, Claim 28 is, by definition, allowable, and therefore, is not properly restricted therefrom.

It is noted that 37 C.F.R. §1.145 does not prohibit Applicants from amending claims, or adding claims that further claim the invention. Claims 27 – 30 include all of the elements of Claim 18 that is presently being prosecuted. Reconsideration and withdrawal of the restriction requirement for Claims 27-30, in light of the above remarks, are respectfully requested.

Claim Rejections Under 35 U.S.C. § 112, First Paragraph

Claim 22 stands rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the Specification in such a way as to reasonably convey to one skilled in relevant art that the inventors, at the time the specification was filed, had possession of the claimed invention. Applicants respectfully traverse this rejection.

35 U.S.C. §112, first paragraph, states:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

More specifically, the Examiner states,

Claim 22 filed on 4/14/2005 including a limitation “disposing a thermoset coating on a side of the plastic surface opposite the core” as recited in lines 1-2 was not described in the specification as originally filed and appears to be new matter.

(FOA 08/06, Page 3)

Applicants respectfully traverse this rejection. In order to determine whether an application meets the “written description” requirement with respect to later-filed claims, the application need not describe the claimed subject matter in exactly the same terms as used in the claims. *In re Lukach*, 442 F.2d 967, 969, 169 U.S.P.Q. 795 (C.C.P.A. 1971). It must simply indicate to those of ordinary skill in the art that, as of the filing date, the applicant had invented what is now claimed. *Id.*, at 1563, 19 U.S.P.Q.2d at 1116; see *In re Wertheim*, 541 F.2d 257, 191 U.S.P.Q. 90, (C.C.P.A. 1976).

As is described in the originally filed specification, (Paragraphs [0046]-[0055]), the non-homogenous substrate may comprise a plastic that may include one or more cavities/inserts/cores, disposed at various locations with various geometries, as shown in Figures 8-21. Here the substrate comprises a “plastic surface and a core”. As is clear through out the specification, a coating can be on the substrate. Here the coating, on the substrate is claimed to be a thermoset. Claim 22 clarifies that the thermoset coating is disposed not between the plastic and the core, but on a side of the plastic opposite the core. In other words, the plastic is between the thermoset coating and the core.

For example, in Paragraph [0080], “Once the substrate is coated with polymer, and formed with the appropriate surface features, if desired, additional layers can then be applied to the substrate.” Then, in Paragraph [0081], “The layers applied to the substrate may include one or more data storage layer(s) protective layer(s), dielectric layer(s), insulating layer(s), combinations thereof”. This is also shown in Figure 2. Thus, the thermoset coating is applied to a side of the plastic surface opposite the core.

Claim 22 is clearly supported by the Specification as originally filed. There is no requirement that a limitation be specified in the identical words used in the claim, merely that it be supported by the application as originally filed. Since there is clear support for the language of Claim 22, the requirements of 35 U.S.C. § 112, first paragraph, have been met.

Reconsideration and withdrawal of this rejection are respectfully requested.

#### Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claim 22 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular,

The phrase of “disposing a thermoset coating on a side of the plastic surface opposite the core” as recited in lines 1-2 renders the claim vague and indefinite. It is unclear as to where the side surface of the plastic surface opposite the core is indicated.

(FOA 08/06, Page 3)

As described above, Claim 22 is clear and definite, and fully supported by the specification. The thermoset coating is applied to the side of the plastic layer of the substrate that

is opposite the core. The substrate of Applicants claimed invention has many different embodiments. Claim 22 particularly supports §112 requirements, as it reflects that the thermoset coating is not part of the substrate. As noted above, the plastic surface is between the core and the thermoset coating. Thus, the requirements of 35 U.S.C. §112, second paragraph, have been met. Reconsideration and withdrawal of this rejection are respectfully requested.

Claim Rejections Under 35 U.S.C. § 102(e)

Claims 18-20, 25 and 26 stand rejected under 35 U.S.C. § 102(e), as allegedly anticipated by U.S. Patent No. 5,972,461 to Sandstrom. Applicants respectfully traverse this rejection.

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Varient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987). The Examiner asserts that Sandstrom discloses,

injection molding a substrate formed from two or more layers bonded together (as per claim 25, one of the two or more layers can be plastic having a plastic surface and another of the two or more layers can be a preformed core)

(FOA 08/06, Page 4)

In addition, the high-flow polycarbonate substrate can be formed from a single or two or more layers bonded together. Therefore, one of the two or more layers of the substrate can be formed by injection molding to another of the two or more layers.

(FOA 08/06, Page 6)

Applicants respectfully submit that the Examiner has failed to prove that Sandstrom anticipates each and every element of Claim 18. Sandstrom does not disclose a substrate comprising a “plastic surface and a preformed core”, as claimed in Claim 18. In fact, the Examiner fails to provide where Sandstrom even suggests a preformed core.

While Sandstrom discloses that the substrate “can be formed from a variety of materials including thermosets, thermoplastic, metal, or glass.” (Col.7, lines 4-6). Sandstrom does not disclose that the substrate comprises “a plastic surface and a preformed core”, as claimed in Applicants novel Claim 18.

Furthermore, Sandstrom also discloses that,

Substrate preferably is formed as a single, integrally formed piece, but could be constructed from two or more layers bonded together, for example, adhesive bonding or lamination. For example, two polycarbonate substrates produced from conventional 1.2mm MO substrate molds could be bonded together to provide a 2.4mm substrate. To reduce time and complexity of fabrication, however, such a polycarbonate substrate is preferably integrally formed from a single mold as a single, non-layered substrate.

(Col. 7, lines 44-52)

Sandstrom fails to disclose injection molding a substrate comprising a plastic surface and a preformed core. The “adhesive bonding or lamination” of two or more layers in Sandstrom is different than the subject of Claim 18, whereby the substrate comprises a plastic layer and a preformed core. Furthermore, Sandstrom fails to disclose a plastic surface “disposed around the preformed core”, as claimed in Claim 25, or that the preformed core comprises a different material than the plastic surface, as claimed in Claim 26.

For at least the reason that Sandstrom fails to teach injection molding a substrate comprising a plastic surface and a preformed core, Sandstrom fails to teach all of the elements of Claim 18 and therefore fails to anticipate the present claims. Reconsideration and withdrawal of this rejection are respectfully requested.

#### Claim Rejections Under 35 U.S.C. § 103(a)

Claims 21, 23, and 24 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 5,972,461 to Sandstrom in view of U.S. Patent No. 6,055,140 to Marchon. Applicants respectfully traverse this rejection.

It is alleged that Sandstrom teaches all of the limitations except a material for the plastic surface. (FOA 08/06, page 5) However, as explained above, Sandstrom does not teach all of the limitations, in particular, Sandstrom does not disclose or suggest a substrate comprising a “plastic surface and a preformed core”, as claimed in Claim 18. For at least the reasons that all of the elements are not disclosed in the prior art, the present claims are non-obvious.

In applying Section 103, the U.S. Court of Appeals for the Federal Circuit has consistently held that one must consider both the invention and the prior art “as a whole”, not

from improper hindsight gained from consideration of the claimed invention. See, *Interconnect Planning Corp. v. Feil*, 227 U.S.P.Q. 543, 551 (Fed. Cir. 1985) and cases cited therein.

According to the *Interconnect* court

[n]ot only must the claimed invention as a whole be evaluated, but so also must the references as a whole, so that their teachings are applied in the context of their significance to a technician at the time - a technician without our knowledge of the solution.

*Id.*

In the present case, Sandstrom fails to teach injection molding a substrate comprising a plastic surface and a preformed core as is explained above. Also, Sandstrom, when read as a whole, teaches away from discs having sizes of up to about 1.2 mm.

A rewritable optical recording disk has a substrate with an increased thickness that is greater than or equal to approximately 1.5 mm and less than or equal to approximately 2.5 mm. The increased thickness of the substrate enhances the flatness of the recording disk relative to a recording plane.

(Abstract)

The disk fabrication process, for example, can produce warpage and tilt in the disk. With thinner substrates, in particular, the effects of gravity and thermal gradients during the post- mold cooling phase can cause uneven densification and unbalanced thermal stresses at different areas of the disks. For example, portions of the disk closest to the mold surface will cool more quickly. The result is disk warpage and tilt.

(Col. 2, line 64 – Col. 3, line 4)

In accordance with the disk of the present invention, the increased thickness of the substrate provides significantly enhanced flatness by increasing the rigidity and weight of the disk. The increased rigidity enables the disk to effectively resist deflection during disk drive operation. The increased weight and resulting gravity of the disk also counteract forces that would otherwise cause significant warpage and tilt during fabrication. Substrate thicknesses that are greater than or equal to approximately 1.5 millimeters (mm) provide the rigidity and weight necessary to achieve desired flatness across the surface area of the disk...

(Col. 4, lines 3 – 14)

In other words, a major focus of the specification of Sandstrom is the thickness of the substrate, i.e., a thickness of greater than about 1.5 mm. When substrates of a thickness of 1.2

mm are discussed, they are discussed from the perspective of laminating them together attain a 2.4 mm thick disk:

Substrate 12 preferably is formed as a single, integrally formed piece, but could be constructed from two or more layers bonded together by, for example, adhesive bonding or lamination. For example, two polycarbonate substrates produced from conventional 1.2 mm MO substrate molds could be bonded together to provide a 2.4 mm substrate.

(Col. 7, lines 44 – 49)

Therefore, in accordance with 35 U.S.C. §103, when Sandstrom is read as a whole, it fails to teach several elements of the claims. For example, Sandstrom fails to teach the claimed thickness (Sandstrom actually teaches away from our claimed thicknesses) and the claimed substrate (e.g., injection molding a substrate comprising a plastic surface and a preformed core).

It is further alleged that

At the time the invention was made, it would have been an obvious matter of design choice... to apply the material recited in the present invention because Applicant has not disclosed that the material as recited in the claimed invention provides an advantage...

(08/06, Page 5)

Obviousness is not based upon what an artisan could do or what an artisan may try, but is based upon what an artisan would be motivated to do with an expectation of success.

“Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, No. 04-1616 (CAFC March 22, 2006) citing *In re Lee*, 277 F.3d 1338, 1343-46 (Fed. Cir. 2002); and *In re Rouffett*, 149 F.3d 1350, 1355-59 (Fed. Cir. 1998). “When the [Examiner] does not explain the motivation, or the suggestion or teaching, that would have led the skilled artisan at the time of the invention to the claimed combination as a whole, [it is] infer[ed] that the [Examiner] used hindsight to conclude that the invention was obvious.” *Id.*

In the present case, the Examiner makes a merely conclusory statement, namely that “it would have been an obvious matter of design choice... to apply the material recited in the present invention”. There is no support based upon the prior art; the examiner supplied no motivation or

expectation of success to support the alleged obviousness. Since the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, and since rejections on obviousness grounds cannot be sustained by mere conclusory statements, no *prima facie* case of obviousness has been established. Reconsideration and withdrawal of this rejection are respectfully requested.

It is believed that the foregoing remarks fully comply with the Final Office Action and that the claims herein are allowable to Applicants. Accordingly, reconsideration and withdrawal of the restriction and the rejections and allowance of the case are respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-1131.

Respectfully submitted,

CANTOR COLBURN LLP

By /Pamela J. Curbelo/  
Pamela J. Curbelo  
Registration No. 34,676

Date: October 27, 2006  
CANTOR COLBURN LLP  
55 Griffin Road South  
Bloomfield, CT 06002  
Telephone (860) 286-2929  
Facsimile (860) 286-0115  
Customer No.: 23413